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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Jock D. MacKinlay

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EXAMINER

MA, CALVIN

ART UNIT

PAPER NUMBER

2629

NOTIFICATION DATE

DELIVERY MODE

03/05/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/687,487	Applicant(s) MACKINLAY, JOCK D.	
	Examiner CALVIN C. MA	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 and 25-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 12-17, 23 and 25-29 is/are rejected.
- 7) ☐ Claim(s) 7-11 and 18-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The applicant's reply filed on 8/17/2008 has been entered and considered by the examiner, the prior art Suzuki US Patent 6,344,836 and Hogle, IV US Patent 5,923,307 are introduced for new grounds of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 12-14, 23 and 25-29 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Suzuki (US Patent: 6,344,836).

As to claim 1, Suzuki teaches a method of managing seams (i.e. the area that separates the display devices 30) (see Fig. 7, Col. 9, Lines 10-67) comprising the steps of:

determining a composite display (i.e. the display of aquarium made of at least five display devices 30) (see Fig. 7) comprising at least two external displays (30), each display associated with a view into a contiguous virtual display space and being

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separated from an adjacent display by a seam that defines an area that cannot display output information (i.e. the virtual aquarium is a contiguous virtual display space where the fishes are shown to be continuous in side) (see Fig. 7, Col. 9, Lines 35-65);

determining seam information associated with the seam area (i.e. the computer 10 is able to determine the space that the display are apart and remote control the display accordingly) between the at least two displays (see Fig. 7, Col. 9, Lines 10-67);

determining output information (i.e. the computer 10 determines the image data to be feed into the various modular display panel 30) (see Fig. 7);

determining display layout adjustments for output information associated with views into the contiguous virtual display space, the display layout adjustments being based on the determined seam information and the output information (i.e. since the aquarium program is able to correctly display the fish as they move across the various display screen 30 the seam information is naturally accounted for in the successful simulation of the aquarium) (see Fig. 7);

displaying the output information for each display based on the determined display layout adjustments (see Fig. 7);

Even if it is determined that Suzuki could not fully recite all of the limitations of claim 1, it would have been obvious for one of ordinary skill in the art at the time the invention was made would have been able to modify the modular display system of Suzuki to meet the limiting scope of claim 1.

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As to claim 12, Suzuki teaches a system for managing seams in composite display system comprising:

an input/output circuit (i.e. the input/output circuit 40 which connects the computer with the plurality of the screen) (see Fig. 7);

a memory (the memory storing the source image for the computer PC 10) (see Fig. 16);

a processor (i.e. the CPU of the computer 10) (see Fig. 7);

a seam information determination circuit, that determines seam information for a seam between at least two external adjacent output displays that can not display output information (i.e. computer 10 is able to run the aquarium application on the personal computer which determines the seam between the displays and create the appropriate display images on screen and this calculation is done on at least one part of the processing system involving the memory and CPU of the computer 10) (see Fig. 7, Col. 9, Lines 15-60);

a display layout adjustment circuit (i.e. the computer has display controller 15) (see Fig. 1, Col. 5, Lines 10-23) that determines display layout adjustments for the output image information associated with views into a contiguous virtual display space, the display layout adjustments being based on the determined seam information and the output information, and where the processor displays the output information for each display based on the determined display layout adjustments (i.e. the computer 10 uses the operating system to run the virtual aquarium application and then output this

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adjusted display data to the display controller 15 to be outputted) (see Fig. 1,7, Col. 7 Line 10-67);

Even if it is determined that Suzuki could not fully recite all of the limitations of claim 1, it would have been obvious for one of ordinary skill in the art at the time the invention was made would have been able to modify the modular display system of Suzuki to meet the limiting scope of claim 1..

As to claims 23 and 25, see claim 1 above, both claims 23 and 25 are analyzed to be the same in scope as claim 1, and are rejected on the same ground, since Suzuki disclosed the computer based system where by the software and device are implemented to accomplish the method of display correction (see Fig. 3, Col 7, Lines 18-37).

As to claims 2 and 13, Suzuki teaches where the seam information is determined based on at least one of: retrieve stored information (i.e. the aquarium application during its operation must load from existing storage of data to determine the proper placement of the fish on the display) (see Fig. 1, 7, Col. 9, Lines 25-64).

As to claims 3 and 14, Suzuki teaches where determining the seam information based on retrieving stored display information comprises: determining display information for the at least two displays; and adding the bezel based seam information for each of the at least two displays (i.e. the computer software application is able to

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compensate for the entire area in between the two display which will naturally include the bezel area which will more or less exist on every display device) (see Fig. 7).

As to claim 26-29, Suzuki teaches wherein the at least two displays are discrete displays and every image on the at least two discrete display is displayed (i.e. the two separate monitor unit 30 are discrete and the aquarium scene assigned to the monitor are fully displayed on the unit as it is intended) (see Fig. 7, Col. 9, Lines 35-65).

4. Claims 4-6 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (US Patent: 6,344,836) in view of Hogle, IV (US Patent 5,923,307).

As to claims 4 and 15, Suzuki is silent on whether or not the seam information is dynamically (i.e. camera based system is a computer driven dynamic seam detection system) determined based on sensor information; Hogle, IV teaches the seam information is dynamically determined based on sensor information (i.e. the computer system has sensor in the display circuitry that is able to determine if a display is removed from the array of display and adjust the multiple display system dynamically) (see Hogle, IV Fig. 17, Col. 18, Lines 1-25).

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to have utilized the dynamic sensor based seam determination system of Hogle, IV in the overall modular display system of Suzuki in

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order to create a specific Windows based solution to the modular system design (see Hogle, IV, Col. 5, Lines 23-60).

As to claims 5 and 16, Hogle, IV teaches wherein manually determining the seam information comprises measuring the area between the displays (i.e. the user is able to select the format of the monitor output and make adjustment on the orientation and specific layout of the display format and precisely move the virtual display desktop and change its area) (see Fig. 9-10, Col. 11, Lines 1-56).

As to claims 6 and 17, Hogle, IV teaches where determining the output information for each display associated with a view comprises intercepting output information from at least one of: the operating system level (i.e. the Windows Operating System have full control over the adjustment of each of the display system) (see Fig. 9-10, Col. 11, Lines 1-56).

Allowable Subject Matter

5. Claims 7-11 and 18-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

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6. Applicant's arguments with respect to claim 1-6, 12-17, 23 and 25-29 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CALVIN C. MA whose telephone number is (571)270-1713. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen can be reached on 571-272-7772. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Calvin Ma
February 26, 2009

/Chanh Nguyen/
Supervisory Patent Examiner, Art
Unit 2629